RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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August 7, 2003

Franco LaGreca
U.S. Department of the Navy
Engineering Field Activity Northeast
10 Industrial Highway
Code 1823-Mail Stop 82
Lester, PA 19113-2090

RE: Remedial Investigation Work Plan, Site 17, Building 32 Gould Island, Naval Education and Training Center, Newport, Rhode Island

Dear Mr. LaGreca,

The Rhode Island Department of Environmental Management, Office of Waste Management (RIDEM) has reviewed the Remedial Investigation Work Plan, Site 17, Building 32 Gould Island, dated July 14, 2003. Attached are comments generated as a result of this review. The comments either address modifications made by the Navy to address previous comments or are additional comments based upon new information presented in the Work Plan

The Office of Waste Management has reviewed the previous work plans and other associated documents submitted by the Navy for this site and has generated a number of comment packages. In addition, there have been numerous meetings with the Navy to discuss the scope and content of the site investigation. A review of the current work plan reveals that the Navy has not addressed the issues broached in the early submittals, including the most recent comment package generated for this site. Please modify the current work plan to address these issues.

As noted in the title, the work plan is limited to the investigation of Building 32. It is not an investigation of the Power House, the Acetylene Generator Building, or other potential source areas on the northern end of the island. Although limited sampling is proposed in the vicinity of some of these structures, the sampling is insufficient to support a no further action position for these sites.

If the Navy has any questions concerning the above, please contact this Office at (401) 222-2797. ext. 7111.

Sincerely,

Paul Kulpa

Paul Kulpa, Project Manager
Office of Waste Management
cc. Mathew DeStefano, DEM OWM
Richard Gottlieb, DEM OWM
Kymberlee Keckler, EPA Region I
Cornelia Mueller, NETC

Comments on Work Plan for Remedial Investigation
Site 17 Building 32
Gould Island

1. **Section 1.1, Background,**
Page 1-1.

This section notes that the remedial investigation report will be prepared in accordance with EPA guidance. Please note that the remedial investigation must also be prepared in accordance with the RIDEM Remediation Regulations

Evaluation of Navy's Modification

The Navy has not modified the Work Plan. Be advised that in accordance to Federal regulatory requirements under CERCLA the most conservative approach should be implemented at the site. Please modify the work plan to state that the most conservative approach will be applied to the site.

5. **Section 1.5, Schedule and Regulatory Oversight**
Page 1-6.

This paragraph notes that regulators will be required to provide their own transportation for site inspections. Assuming RIDEM's inspector will make an average of two inspections per week and that the investigation will last for six months (52 trips) and additional $41,600 will need to be added to the DSMOA to cover these costs. (Cost based on chartered boat @ $800/day).

Evaluation of Navy's Response

The Navy has stated that "the Navy will provide transportation to and from the island at regular times to be specified on days where work there is schedule to occur."

As previously requested, please state if transportation will be provided only when workers, equipment, etc. are transported to the island or as independent of these activities.

6. **Section 2.2, Site History**
Page 2-5.

This section of the report includes a discussion of groundwater contamination at the site.

The report should note that free product was observed south of the former Power Plant.

Evaluation of Navy's Response

The presence of free product near the Power House has been brought to the attention of the Navy in two previous comment packages. This information was obtained from previous reports submitted by the Navy. The function of the RI work plan is to identify areas, which require additional investigation and or remediation. Unless the Navy intends to propose a remedial action this area must be noted in the work plan.

13. Section 2.5.5, Decision Rule, Item 1
Page 2-24.

Please modify this section to note that in accordance with RIDEM Remediation Regulation 8.01A the cumulative excess lifetime cancer risk cannot exceed 1 x 10^{-5}. In addition, Regulation 8.02A does not allow for a cumulative HQ greater than one for any target organ

Evaluation of Navy's Response

The Navy agreed with the comment, however the section has not been modified to reflect RIDEM Remediation Regulations. Instead a reference is made to a subsequent section, which deals with the State Regulations. Please be advised that this section must state that the cumulative cancer risk cannot exceed 1 EE –5. This would make the acceptable risk rank from 1 EE –5 to 1 EE –6. Please modify the work plan as agreed.

14. Section 3.0 Sampling and Analysis Plan
Page 3-1.

A number of studies have been performed a this site. Soil, concrete, sediment and source samples have been taken. As typically done for Work Plans of this nature the report should include a. map depicting all historic sample locations. The report should also include a map and a table with the results of these sampling efforts. The Navy may wish to provide this information on separate maps. It is recommended that this information be provided on large fold out maps.

Evaluation of Navy's Response

The Navy has indicated that the requested information has been included in the report. A review of Appendix A indicates that this is not the case. Please provide the requested information.

16. Section 3.1.1.1, General Approach for Boring and Well Installation, Page 3-3.

This section of the report includes tables and figures delineating the proposed sampling locations. In past correspondence and meetings dealing with the previous submittals of the work plan or other documents, the regulatory agencies identified known or potential areas of concern which warranted additional investigations, such as leach fields, discharge points from sludge tanks, areas of free product, etc. The Navy indicated that these areas would be address. A review of the current work plan reveals that this is not the case. Therefore, please modify the work plan to include the investigation of areas of concern previously identified by the regulatory agencies.

Evaluation of Navy's Response

The Navy has stated that the regulatory agencies concerns with respect to past correspondences have been addressed. Further all potential source areas have been included in the work plan. As demonstrated by the comment packages generated at this site, the regulatory agencies concerns with respect to the scope and the implementation of the work plan has not been addressed. In regards to potential source areas below is a list of areas of concern previously brought to the attention of the Navy. The Navy's position concerning the scope of the investigation has been fluid as to whether it is limited to Building 32 or encompasses the entire northern section of the island. Areas of concern listed below include non Building 32 structures. If it is the Navy's intent to limit the investigation to Building 32, these other areas of concern may be addressed at a later date.

Plating Room Bag House Discharge Location

Sample collected during the SASE indicate that soil in this area exceeds DEM regulations for PAHs, lead and arsenic. The Navy should either state that this area will be remediated or propose additional samples to further delineate the extent of contamination.

Acid Storage Building

Sample taken in the gutter adjacent to acid storage area exceeded DEM regulations for lead and PAHs. After this sample was taken and the structure was demolished a sump was found beneath the Acid Storage Building. The sump should be investigated and sampled. If it is determined that the sump is a UIC the sump should be closed in accordance with the DEM's UIC regulations.

Surface Soil Samples 5, 6 and 8

These surface soil samples taken during the SASE exceed the DEM's regulatory requirements for PAHs and metals. The Navy should either state that this are will be remediate or propose additional samples to further delineate the extent of contamination.

Sand Blasting Booth Sump Electroplating Shop

During demolition activities a sump was found beneath the sandblasting booth. The clean soil placed in the sump during the demolition process should be removed and a sample of the sand blasting grit should be collected and analyzed. The base of the sump should be inspected for floor drains, UICs, etc and sampled accordingly. This wil necessitate the removal of the material in the sump.

Building 38 Maintenance Building

Building 38 had a variety of uses including being used as a maintenance building. This building was identified as an area of concern, which warranted investigation in a previous report submitted by the Navy. Therefore, plans for the building should be examined to determine if there were any drains or sumps located in the building. Surface and subsurface soil samples should be collected and a sediment sample should be collected adjacent to the site.

Acetylene Generator Building

Two sludge disposal pits with drains were identified on site plans on the southern end of the building. The existence of these structures including the drains were confirmed during the demolition of the building. Samples should be collected from beneath the base or adjacent to the base of the sludge pits to determine if a release had occurred. This may be accomplished using test pits. Further, a test pit should be dug to track the drain to see if it is compromised and to determine its discharge location. Any compromised portions of the drainpipe and its discharge location should be sampled. The work plan proposes installing soil borings in the vicinity of the building to access the condition of the storm and sewer drains. These borings will not address the above concerns.

Pipe Trench Connecting Acetylene Generator Building to Power House

This was a trench which connected the building to the Power House. Plans should be reviewed to determine whether petroleum or any other material of concern was piped through the trench. If plans are not available, inspect and sample the trench. Note this

trench was not sampled during the demolition of the building.

Catch Basins and Manways in the vicinity of Building 32.

A number of catch basins and manways are located around Building 32. Elevated levels of PAHs, metals and PCBs have been found in surface soils in the vicinity of these catch basins and manways. The Navy agreed to leave these structures intact so that they could be inspected and sampled as necessary. The work plan should specify that each structure will be inspected for signs of contamination and to determine whether they are connected to any discharges from the buildings. Sludges or other suspected residue should be tested. Catch basins on other portions of the base have been found to be UICs. A determination will be made as to whether the structures function as UICs. Any UIC must be either permitted or closed in accordance with the UIC regulations.

Petroleum Contaminated Soil in the Vicinity of Building 57

Petroleum contaminated soil was found in the vicinity of Building 57. The Navy should either propose a remedial action for these soils or collect additional samples to ascertain the nature and extent of contamination.

Free Product in Former Vault Building 33

Free product was found beneath the vault in Building 33. The Navy should either propose a remedial action for this area or collect additional samples in order to ascertain the nature and extent of contamination.

Oil Intercept Drain and Sump Building 33

Oil interceptor drain and sump associated with the compressors and tank vault in Building 33 (PW Dwg No. 5449-61). The piping network and the sump should be investigated and sampled.

Floor Drains Discharge Pipe Building 33

In a report previously submitted by the Navy it was recommended that the drains exiting Building 33 be tracked, inspected and sampled since chlorinated solvents and petroleum products may have been discharged through these drains.

Buildings 41 and 50

These buildings were identified as areas of concern, which warranted additional investigation in a previous report submitted by the Navy due to their use as maintenance shops and their proximity to Building 44.

Elevated Soil Gas Reading, Northwest Corner

Elevated soil gas readings were found at the northwest corner of the island. Based upon the scale of the maps provided the proposed monitoring well network for the northwest corner will not address this area.

Elevated Surface Soil Results

Elevated levels of contaminants above regulatory standards were found in the vicinity of the shed near the northwest corner of Building 32. The Navy may either propose a remedial action for this area or take additional samples in order to determine the extent of contamination.

Vats/Trench Engine Room Building 32

Samples should be taken from beneath vats and trench in engine room of Building 32. Elevated levels of contaminants were found in a composite sample collected at these locations.

Trenches Building 32

Trench south of solvent trenches in Building 32 was found to contain oily grit and had elevated levels of PAHs and metals. Samples should be collected from beneath the trench to determine if there has been a release. Discharge pipe from trench should be tracked and the discharge location sampled.

East and West Equipment Trenches

These trenches contained elevated levels of PAHs and metals. Samples should be collected from beneath the trench to determine if there has been a release. Discharge pipe from trench should be tracked and the discharge location sampled.

Trench West of Equipment Trenches

The trench west of the equipment trenches has not been sampled. This trench should be inspected and sampled.

Northeast corner of Building 32

A series of switching electrical panels, one of which was known to contain a five-gallon oil reservoir was located in the northeast corner of Building 32. The equipment was moved during the demolition process and additional electrical equipment was brought into the area. Concrete chip samples should be collected and analyzed for PCBs using

the same sampling grid that was employed outside of the building. At least one of the sampling points must be beneath the former locations of the control panel with the five-gallon oil reservoir.

Well Deep Well House

The well at this location should be sampled to ensure that it was not used for the disposal of waste materials and to provide general information concerning groundwater conditions in the area. If contamination is not found the well should be abandoned in accordance with the Rhode Island Groundwater Well abandonment regulations.

16a. Section 3.1.1.1, General Approach for Boring and Well Installation, Page 3-3.

The results of the soil gas survey for Building 32 were included in the report.. However, a black and white version of the color survey results was submitted. The isopleths could not be distinguished in the black and whiter version. Please submit a color version of the report for review as it may recommendations concerning sample locations.

18 Section 3.1.1.1, General Approach for Boring and Well Installation, Page 3-3.

During the demolition and other activities a number of areas were uncovered, such as the partially sump filled with blasting sand located beneath the sand blasting booth, the sump located beneath the former acid storage shed, etc. These areas were not addressed during the previous sampling efforts, as their existence was not known. Please modify the report to include sampling of these and similar areas at the site.

Evaluation of Navy's Response

The Navy has stated that the aforementioned sump and other delineated structures will be investigated as outlined in Section 3.2.3, UIC Evaluation. Section 3.2.3 notes that a sample will be collected from any residue found in the depression associated with the UIC and a sample of soil or sediment will be collected at the discharge location for the UIC. Although not stated this will entail test pitting at the site. As an illustration, the soil and sand blast debris in the sump in the sandblasting booth will have to be removed and sampled. The base of the sump will have to be inspected in order to ascertain whether a floor drain is present. The floor drain will then have to be tracked to see if it discharges to a UIC. In order to avoid confusion in the field the work plan should specify that test pits would be dug at the site.

21. Section 3.1.1.1, General Approach for Boring and Well Installation, Page 3-3.

The Work Plan calls for the use of soil borings to collect subsurface samples. At a number of locations it will be necessary to dig test trenches, (i.e. excavation and sampling of bottom of sumps, inspection of bottom of sumps for drains, tracking pipes leaving structures, etc). Please modify the report to include test pitting at the site

Evaluation of Navy's Response

The Navy has noted that there are infiltration concerns associated with digging into the foundations. Potential infiltration concerns are not associated with the digging of test pits outside of the foundations and/or removing fill placed into trenches to inspect for drains or UIC. Therefore test pits can be dug in these areas. In regards to the foundations the Navy acknowledges that in order to ascertain whether a release has occurred beneath a trench or along a pipe run it will be necessary to excavate. However, this action can be done if and when the foundations are removed. If the Navy does not intend to remove the foundations then a series of subsurface samples from beneath the trenches and along the pipe runs can be collected via borings. If the foundations are to be removed then test pits can be dug and sampled and then covered with poly until the entire foundation is excavated.

26 Section 3.2.1.4, Bedrock Monitoring Well Installation, Page 3-21.

The report states that the bedrock well screen will be placed based upon the results of the packer test and rock core recovery. Screen intervals for monitoring wells are placed based upon contamination levels and not necessarily the ability of a fracture to produce water. (that is, it is better to a screen a low yield portion of the bedrock, which is contaminated, then a high yield portion of the bedrock, which is clean). In order to avoid confusion the report should clearly state in this section that the wells would be screened in the most contaminated zone. The nature of the screening should also be discussed.

Evaluation of Navy's Response

The Navy concurs with comments and stated that the work plan would be revised to include a discussion stating the zone of highest contaminant concentration will be targeted for screen zones. Please indicate which portion of the revised work plan contains this discussion for bedrock wells.

27. Section 3.2.1.7 Groundwater Sampling, Page 3-25.

The report has proposed collecting water samples via the low flow method. In addition, to low flow sampling, all newly installed wells should be sampled using a conventional bailer. The results of the two analyses will be compared and a decision will be made as to whether modifications in the sampling method are necessary in any subsequent sampling event.

Evaluation of Navy's Response

Current guidance acknowledges that low flow sampling may be problematic in stratified screen zones. That is, the low flow technique samples a narrow portion of the screen zone. Placement of the low flow sampler higher or lower in the screen interval may produce different results. To overcome this problem it may be necessary to take multiple samples along the screened interval and screen them in the field. The stratification problem has been found even in aquifers that were thought to be homogenous. The Office of Waste Management request is simple. In all newly installed wells either a series of samples should be collected and tested or a bailed sample will be collected along with a low flow sample. If the bailed results for organics are higher than the low flow sample it may mean that the low flow sampler needs to be placed in a different portion of the aquifer.

30a Section 3.2.3, UIC Evaluation, Page 3-33

The plan notes that residue samples, if present, will be collected from a potential UIC near the entrance to the plating room. In addition to the residue sample a core is normally taken of the soil at the base of the UIC. The core is extended down to native soils and suspect areas are sampled. This procedure has been applied to other UICs on the island and the base. Please modify the work plan to reflect this requirement.

31. Section 4.0 Quality Assurance Quality Control, Page 4-1.

The report states that the site samples will undergo TPH analysis for DRO organics. Please be advised of the following requirements with respect to TPH analysis by GC methods: The TPH test method employed must be able to detect the full range of petroleum products found at the site (if both light and heavy oils are present two different TPH test methods will have to be employed). The GC test method or any modification of a test method must be designed for the petroleum product of interest.

All GC must be run to the base line, all petroleum products must be quantified, standards must be run with the analysis on the same GC, and copies of the GC for both the standards and samples must be included in the report. Since, unlike the lighter oils, there is considerable variability in the chromatograms for heavy oils, (i.e. No 5 oil), all petroleum "humps" must be quantified. Please modify the report to reflect these requirements.

Evaluation of Navy's Response

The Navy concurs with the comments and stated that the work plan will be revised to reflect these requirements. Please indicate which section of the work plan contains these revisions. In addition, since heavy oils, grease and lubes were found at the site all GCs must be run to a minimum of C-36.

31a **Section 4.0 Quality Assurance Quality Control, Page 4-1.**

A review of the information provided by the Navy indicates that HRT was stored at the site. As the work plan is a public document the report should state what HRT is and whether the proposed test methods for TPH will detect this product.

32. **Section 4.0 Quality Assurance Quality Control, Page 4-1.**

This section of the report lists the analytes for the various samples. The list of analytes should include constituents, which are known or expected to exist at the site, (i.e., torpedo fuels were alcohol based, an ethyl alcohol underground storage tank was located in the vicinity of Building 32, explosives were used in the torpedoes, asbestos releases prior or during the removal action, TPH has been found at the site, etc.). Please modify the report to include the site related contaminants.

Evaluation of Navy's Response

The Navy acknowledges that alcohols were present at the site however; the Navy contends that alcohols are not persistent in the environment and therefore they will not be tested for. Alcohols have been found at old dumpsites therefore, they must be tested for. The response notes that asbestos is not a CERCLA contaminant and its testing is unnecessary. TPH is not a CERCLA contaminant yet testing for this contaminant is being conducted at the site. Furthermore, DEM regulations require testing for contaminants of concern during the investigation of a site. In regards to explosives or chemicals the Navy has stated that there is no evidence that explosives were stored in Building 32. The Navy has expanded the investigation beyond the Building 32 footprint and it now covers the entire northern section of the island.

Explosion proof bunkers were found on the southern end of the island and the ACOE has found it necessary to enlist the assistance of the military UXO teams due to possible presence of explosive at scattered locatios throughout the southern end of the island, which the ACOE was investigating. Therefore the COC list should be expanded to include explosive related contaminants.

34. Section 4.2, Project Action Limits, Page 4-3.

The site will have to meet both State and Federal Regulations. Therefore, since petroleum has been found at the site the Project Action Limits must include TPH. In addition, the State regulations require that free product in any media must be addressed. Please revise this section of the plan to include these requirements.

Evaluation of Navy's Response

The Navy has stated that a test will be conducted for measurable free product in the wells. Please be advised that free product in any media must be addressed, therefore the work plan should be modified to address this requirement. Further since petroleum has been found at the site it must be added to the list of Project Action Limits.

35. Section 5.2, Human Health Risk Assessment, Page 5-4.

The report states that deep soils may not be screened against residential standards. Please be advised that the State's residential standard is not limited to the top two feet. Therefore, this restriction should be removed from the report.

Evaluation of Response

The Navy has stated that screening against residential values is not appropriate since the site is intended for industrial use. Industrial use of the site will necessitate deed restrictions. The Navy may not be able to place these restrictions on the site. Further, deed restrictions are remedial alternatives that are typically addressed during the Feasibility Study. The Remedial Investigation evaluates risk at the site and this risk is not based upon a particular remedial alternative that may or may not be implemented. Therefore, considering the above, the comparison should include residential values.

36. Section 5.2, Human Health Risk Assessment, Page 5-4.

The Navy has not stated whether any land use restrictions will be placed upon the property. Therefore, the risk exposure scenarios should include residential reuse.

Evaluation of Navy's Response

The Navy has stated that land use restrictions are considered in the FS and therefore are not appropriate in the RI. Further the intended use of the site is industrial and therefore a residential scenario is not required. The site lies over a GA aquifer and it is abutted by recreational land. Therefore, under the State's notification regulations, exceedances of the residential standards must be reported to the State.

37. Section 5.2, Human Health Risk Assessment, Page 5-4.

The report proposes eliminating certain contaminants based upon screening against various benchmarks. Screening is only done when the list of contaminants is large. It is typically not done if there are a limited number of constituents found at the site. The work plan should therefore stipulate that screening would only be done if a large number of contaminants were found at the site.

Evaluation of Response

The responses notes that a large number of compounds are expected to be found at the site, and therefore a screening step will be conducted. Be advised that the cumulative risk at the site cannot exceed 10-5 and the HQ cannot exceed 1. Therefore, COCs cannot be eliminated unless it can be shown individually and cumulatively that the COCs do not exceed 1EE-5.

39. Section 5.2, Human Health Risk Assessment, Page 5-4.

The report proposes limiting the recreational scenario to seven days per year. This will not meet State regulatory requirements for unrestricted recreational use. Please modify the report to reflect State regulatory requirements.

Evaluation of Navy's Response

The Navy has stated that the recreational scenario will be evaluated using an EPA exposure scenario and not the value used under the Office of Waste Management

Regulation. Be advised that this is not considered unrestricted recreational use of the site.

40. Section 5.2, Human Health Risk Assessment, Page 5-4.

The proposed exposure scenarios are limited to inhalation or dermal contact with dust. It is known that people harvest shellfish in the area and this activity has been observed during site visits. Further, lobsters are also collected in the area. Therefore, the exposure scenarios should include ingestion of shellfish and lobsters.

Evaluation of Response

It is not clear whether the shellfish exposure will include clams and quahogs, as well as, mussels. If present, the clams and quahogs must be included in the bivalve study. In regards to lobsters, the site is used for harvesting of lobsters. Therefore, lobsters must also be included in the study.

41. Section 5.2, Human Health Risk Assessment, Page 5-4.

The Navy has proposed conducting a limited number of exposure scenarios at the site, industrial exposure, construction worker, etc. The site is classified as GA, therefore groundwater must meet GA standards.

Evaluation of Navy's Response

The Navy acknowledges that the GA groundwater classification requirements are warranted for the site. However, these requirements will not be considered until the FS. The remedial investigation is designed to access risk at the site and determine if regulatory requirements are being exceeded. Therefore the groundwater concentrations must be compared to the GA standards as part of the RI.

43. Section 5.2, Human Health Risk Assessment, Page 5-4.

The report notes that the Human Health Risk Assessment will be conducted in accordance with USEPA and Navy guidance. Be advised that the risk assessment must also meet RIDEM requirements. Please modify the report accordingly.

Evaluation of Navy's Response

The Navy has stated that EPA requirements will prevail over that of the State's. As

stated in guidance documents the more conservative approach should be applied to the site.

44. Section 5.3, Ecological Risk Assessment, Page 5-6.

The work states that site samples will be screened against certain benchmarks. Sediment screening values should include Long and Morgan Values, Region IV, Department of Energy Values and Florida State Values. Region IV, Department of Energy and Florida. State values should also be employed for soil samples

Evaluation of Navy's Response

The Navy has indicated that the above values would be considered in the screening process. It is not clear whether this has been done. Previously, in other reports the Navy included a table with all of the screening values. The value chosen was highlighted. Please include a similar table in this work plan.